MICHIGAN DEPARTMENT OF NATURAL RESOURCES

INTEROFFICE COMMUNICATION

January 16, 1991

TO: Steve Sliver, Env. Engineer, HW-Permits, WMD
Roger Przybysz, Environmental Quality Analyst, Region III (Grand Rapids), ERD

FROM: Al Taylor, Geologist, Geotechnical Support Unit, WMD ABT

SUBJECT: Sealed Power - Review of Revised Closure Plan - Sanford Street TSDF - MID 980 499 735

I have completed a review of the revised closure plan dated September 28, 1990 and have the following comments:

1) The existing data does not conclusively demonstrate that the operation of the hazardous waste management units at the Sanford Street Complex did not contribute to the existing site wide soil, soil vapor and groundwater contamination.

Specifically, WWES has detected elevated soil vapor concentrations of TCE and PCE at sampling locations VS-72 and VS-14 which are adjacent to the solvent recovery tank area. Soil boring 4 (immediately adjacent to the TSDF) contained 1500 ug/l of TCE and 180 ug/l PCE in the 0-5 ft composited soil sample.

Therefore, based on existing data, it is not possible to conclude decisively that the TSDF did not contribute to the existing sitewide contamination.

2) I have reviewed the existing hydrogeologic information available for this facility. This included a hydrologic investigation performed by Meinert in 1984; monitoring data provided by Sealed Power in the revised closure plan; WWES Soil Vapor Investigation, dated October, 1989 (preliminary); and the WWES draft report on Soil Vapor and Hydrogeologic Evaluation at the Sealed Power Technologies Sanford Plant dated October, 1990.

The results of this review suggest that the current production well capture system in not effectively capturing all contaminated groundwater originating from the Sealed Power facility. Groundwater contaminated with significant levels of PCE and TCE appears to be migrating off-site.

This conclusion is based on the review of existing groundwater contour maps, groundwater contour maps constructed during the review of this facility, and review of the existing chemical data. Specifically,

groundwater contour maps do not exhibit any of the features which would be expected from the continuous operation of an effective groundwater extraction system over a number of years (cones of depression, etc.). In addition, high concentrations of PCE and TCE (@ 1000 ug/l) have recently been detected in down gradient monitoring well 8A.

Preliminary calculations of groundwater flow velocity indicate relatively rapid flow (in the range of 1 foot per day).

**Conclusions:**

Based on existing data it is not possible to conclusively separate the TSDF from the existing site wide contamination. However, there does not seem to be any technical merit in remediating the TSDF area any differently from the balance of the contaminated site.

More importantly, the current groundwater extraction system does not appear to be fully containing the TCE and PCE groundwater contamination present at the Sanford Street facility. This problem must be addressed quickly to avoid and/or minimize further off site impacts on this aquifer and its potential users.

Please let me know if you require further information.

cc: Liz Browne/EPA Reporting
HWP/C & E File

| | Violation Class | Yes | No | N/A |
|---|---|---|---|---|
| iv) Type of erosion or corrosion protection used. | (I) | ___ | ___ | ___ |
| v) Characteristic of waste stored. | (I) | ___ | ___ | ___ |
| c) For ancillary equipment has a leak test or other approved assessment been conducted annually? | (I) | ___ | ___ | ___ |

NOTE: Tanks containing no free liquids located inside a building with an impermeable floor AND tanks, including sumps, that serve as part of a secondary containment system, BOTH are exempt from requirements of 265.193; 265.190.

The following (Question 17) is the schedule to upgrade existing tank systems with regard to the RCRA containment and detection requirements (Question 18). The RCRA containment requirements will have to be incorporated, when required, into the existing Act 64 (Question 13 & 14) secondary containment systems.

17. Secondary containment and detection that meets the requirements in question # 18, must be provided for: (265.193(a))

| | | | | |
|---|---|---|---|---|
| a) New tank systems prior to being put into service (any tank installed after 7-14-86). (265.193(a)(1)) | (N/A) | ✓ exempt | ___ | |
| b) Existing tanks used for F020, F021, F022, F023, F026, F027 prior to January 12, 1989. (265.193(a)(2)) | (N/A) | ___ | ___ | ___ |
| c) Existing tank system with documentable age prior to January 12, 1989 or when tanks are 15 years of age, whichever is later. (265.193(a)(3)) | (N/A) | ✓ tank | ___ | |
| d) Existing tank system, without documented age prior to January 12, 1995 but if age of the facility is greater than 7 years then containment must be provided prior to facility reaching 15 years of age or prior to January 12, 1989 or within 2 years, whichever is later. (265.193(a)(4)) | (N/A) | ___ | ___ | ___ |

| | Violation Class | Yes | No | N/A |
|---|---|---|---|---|
| 18. Secondary containment and detection systems must have the following: (265.193(c)) | | | | |
| a) Tank system constructed of compatible material with sufficient strength. (265.193(c)(1)) | (I) | / | | |
| b) Adequate foundation/base. (265.193(c)(2)) | (I) | | | |
| c) Leak detection system designed to detect leak within 24 hours or earliest practical time. (265.193(c)(3)) | (I) | | | |
| d) Sufficiently sloped or drained and all liquid (leaks, precipitation) removed within 24 hours or timely manner. (265.(c)(4)) | (I) | | | |
| e) Must include one or more of the following: | | | | |
| (i) A liner (external to tanks) and must satisfy the following requirements. (265.193(d)(1)) | | | | |
| a) 100% capacity of largest tank within its boundary. (265.193(e)(1)(i)) | (I) | | | |
| b) Prevent run-on or infiltration of precipitation unless excess of capacity. (265.193(e)(1)(ii)) | (I) | | | |
| c) Free of cracks or gaps. (265.193(e)(1)(iii)) | (I) | | | |
| d) Cover any area waste may come in contact with if released. (265.193(e)(1)(iv)) | (I) | | | |

Note: if liner is cement then must have, in addition, 18(e)(ii)(c-f)

| | | | | |
|---|---|---|---|---|
| (ii) Vault systems 265.193(d)(2) and 265.193(e)(1)(iv) must satisfy the following requirements. | | | | |
| a) 100% capacity of the largest tank within its boundary. (265.193(e)(2)(i)) | (I) | | | |

| | | Violation Class | Yes | No | N/A |
|---|---|---|---|---|---|
| b) | Prevent run-on or infiltration of precipitation unless excess of capacity. (265.193(e)(2)(ii)) | (I) | ___ | ___ | ___ |
| c) | Constructed with chemical resistant water stops in place at all joints. (265.193(e)(2)(iii)) | (I) | ___ | ___ | ___ |
| d) | Impermeable, compatible lining or interior coating. (265.193(e)(2)(iv)) | (I) | ___ | ___ | ___ |
| e) | If ignitable or reactive, then provide against vapor formation and ignition. (265.193(e)(2)(v)) | (I) | ___ | ___ | ___ |
| f) | Provide with exterior moisture barrier. (265.193(e)(2)(vi)) | (I) | ___ | ___ | ___ |
| (iii) | Double wall tanks (265.193(d)(3)) must satisfy the following requirements. | | | | |
| a) | Designed as integral structure. (265.193(e)(3)(i)) | (I) | ___ | ___ | ___ |
| b) | Protect metal surface for corrosion. (265.193(e)(3)(ii)) | (I) | ___ | ___ | ___ |
| c) | Capable to detecting releases within 24 hours. (265.193(e)(3)(iii)) | (I) | ___ | ___ | ___ |
| f) | Ancillary equipment (note certain exclusions) must be provided with full secondary containment. (265.193)(f)) | (I) | ___ | ___ | ___ |

Comments: Spot Tank being replaced

| | Violation Class | Yes | No | N/A |
|---|---|---|---|---|

## DESIGN AND INSTALLATION OF NEW TANK SYSTEMS OR COMPONENTS (265.192)

NOTE: New tank systems or components were put in use after 7-14-86.

19. Did the facility obtain a written assessment reviewed and certified by an independent, qualified, registered professional engineer, the included: (265.192)

| | | | | | |
|---|---|---|---|---|---|
| a) | Design standards? (265.192(a)(1)) | (II) | ___ | ___ | ___ |
| b) | Hazard characteristics of the waste(s) to be handled? (265.192(a)(2)) | (II) | ___ | ___ | ___ |
| c) | Determination by a corrosion expert, if needed? (265.192(a)(3)) | (II) | ___ | ___ | ___ |
| d) | If needed, design considerations for UST systems effected by vehicular traffic? (265.192(a)(4)) | (II) | ___ | ___ | ___ |
| e) | Tank system and component installed properly? (265.192(b)) | (II) | ___ | ___ | ___ |

NOTE: New tanks must be installed, if required, with secondary containment as required in 265.193. An independent engineer does not have to certify the containment.

Comments: _____

S[illegible] Power Corporation
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SEALED POWER

April 11, 1986



Mr. Dale M. DeKraker
Environmental Quality Analyst
Hazardous Waste Division
D.N.R.
State Office Building
350 Ottawa N.W.
Grand Rapids, MI 49503

Re: MID 980499735

Dear Mr. DeKraker:

In response to your letter of March 17, 1986, we have implemented the following actions.

1. We are performing an analysis of the material which is being stored in the bulk tank and will send a copy for your review when it is completed. We also have reminded the operations unit to redo this analysis on at least an annual basis. We are still following the written operating practice for the convection stills which insures the consistency of the incoming still bottoms.

2. The Closure Plan has been rewritten showing a more detailed estimate of the actions that will be necessary and the costs of implementation. A system has been established to insure that the plan is updated annually. A copy of the new plan has been attached for your review.

3. The barrels that have accumulation periods in excess of 90 days old are the result of two separate situations:

   a. The drums were being held in anticipation of purchasing a recovery still so that they could be reprocessed on site. Ultimately we decided that the annual volume was too small to justify the expense and that we should discard both the material on hand and future wastes. We now realize that the drums were prematurely labled and should have been relabled when we changed our intentions for this processing.

   b. The drums were shipped for disposal within 90 days from our decision to not to recover the solvent, but the load was rejected by Ross Incineration Services and was returned to our warehouse. Since that

date, we have been working with Ross, but we have not yet gained their approval. If we can't make arrangements with Ross, we will need to locate and arrange approval with another vendor.

We are working to the best of our ability to address these discrepancies and intend to achieve compliance by the May 1, 1986 date.

Thank you,

Dan Girvan

Daniel T. Girvan
Environmental & Energy Manager

XC. EPA - REGION IV

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